Canadian
Pamphlets
03561

Page, John
Report of the chief engineer of public works on the improvements of the River Scugog. Quebec, 1860.

PERMALIFE
PH 8.5
THE HOLLINGER CORPORATION
ARLINGTON, VIRGINIA

REPORT

OF THE

CHIEF ENGINEER OF PUBLIC WORKS

ON THE

IMPROVEMENTS

OF THE

RIVER SCUGOG,

AND THE

"INLAND NAVIGATION OF THE NEWCASTLE DISTRICT."

QUEBEC:
PRINTED BY THOMPSON & CO., SAINT URSULE STREET.

1860.

REPORT

OF THE

CHIEF ENGINEER OF PUBLIC WORKS

ON THE

IMPROVEMENTS

OF THE

RIVER SCUGOG,

AND THE

"INLAND NAVIGATION OF THE NEWCASTLE DISTRICT."

QUEBEC:
PRINTED BY THOMPSON & CO., SAINT URSULE STREET.

1860.

REPORT.

QUEBEC, 30th November 1859.

TO THE HONORABLE THE COMMISSIONER
OF PUBLIC WORKS.

SIR,—In compliance with instructions relative to the Works, constructed and proposed for the improvement of the River Scugog and "Inland Navigation of the Newcastle District," I recently visited the respective localities, and now have the honor to report in order following:—

Commencing at the village of Lindsay, where, by means of a Lock and Dam, the River Scugog is rendered to some extent navigable, and a line of water communication opened in a south-westerly direction to Port Perry, or within 19 miles of Port Whitby, on Lake Ontario.

The Lock is situated on the north side of the River, and the Dam (240 feet long,) starts from a point about 60 feet below the upper gates, and runs obliquely upwards, to the opposite bank, where there are several mills kept in effective operation, by the head maintained on the reach above.

The present line of road on both sides leads towards the Lock, and crosses it by means of a swing bridge placed over the chamber—the river and raceway from the mills, being crossed by two bridges of an inferior class, and now all but worn out.

The exterior works of both Lock and Dam are formed of timber—the latter is in a passable state of repair, but the Lock throughout is in a very dilapidated condition, especially the south wall, which from its position could not be protected by backing. The exposed parts of the timber are completely rotten, and at some places on the south side for several courses in depth, it has fallen to pieces. As a whole, the Lock is so thoroughly worn out and decayed, that, in my opinion to attempt filling it, may at any moment, if the upper gates are opened, lead to its complete destruction, the result of which, would not only be the drawing down of Lake Scugog, and flooding the adjoining country below, but very likely cause serious damage to other works on the line of navigation.

It therefore appears to me that all attempts to use it, either by way of experiment or otherwise, should in future be strictly prohibited. An order to that effect will be the more readily complied with, as it takes from ten to twelve men to swing one of the gates.

Immediately below the Lock, the river turns so suddenly to the northward, that the line of chamber walls, prolonged downwards, would cut across the channel-way within a distance of 150 feet, and the whole river in 200 feet, and, at a distance of 400 feet, a vessel approaching or leaving, is nearly at right angles to the line of the walls.

Access to the Lock is however rendered still more difficult, by a shoal that extends so far out from the line of the north wall, that within 30 or 40 feet of the gates, a vessel has to change its position fully 30 degrees before it can enter.

These objections may be slightly remedied in locating a new structure; but they cannot be wholly done away with, except by forming a new cut, which it is believed would require a greater outlay, than the extent of trade likely to be benefitted would warrant.

At the time of my visit there was from 4 feet 6 inches to 4 feet 8 inches water on the lower mitre sill of the Lock, and in sounding through the channel-way downwards, for a distance of fully one half of a mile, or near a wharf used by the Port Hope and Lindsay Railway Company, at several places the depth was found barely 4 feet, and for the greater part of the distance water of this depth was exceedingly narrow, winding and intricate. At some places the shoals are of rock; but where less depth than 4 feet was found, in a cross section of 60 feet, the obstructions for the most part consisted of silt, saw dust, slabs, sunken timber and loose stones, overlying a thinly stratified rock, at some places of a like height, but generally a little lower than the mitre sill. At this time the water was said to be at its proper height, although on visiting Bobcaygeon the following day, it was found to be fully 5 inches over the apex of the Dam there, which, without "slash boards," is intended, I believe, to regulate the level. Such being the case, the water may at any time be expected to fall, at least 5 inches below what it was when the soundings were taken, thus leaving barely 3 feet 8 inches on some parts of the rock shoal, and considerably less on the sides of a channel of very limited width.

Thus it will be seen that however necessary the construction of a new lock may be the improvement of the channel-way below it, is no less essential to the continuance of the navigation, through and between the Lakes, both of which are works that will be unavoidably attended with considerable difficulty, and expense in their execution.

The position of the Lock is such, that the space to be occupied by it, must be enclosed on three sides, by coffer dams of sufficent height to guard against freshets, during the time the works are in progress, while the nature of the foundation as regards leakage is quite uncertain, and the improvement of the channel is confined to the bed of the river, from which there is no means of turning off the water, except by coffer dams—a mode of proceeding that, under the circumstances, is not recommended, as the rock may be loosened by the ordinary process of blasting under water, and both it and other obstructions advantageously removed, by the dredging machine which the Government has in that vicinity.

It is much to be regretted that the situation of the mills and dam, renders it necessary to locate the proposed new lock at the head, instead of the lower end of this shoal, where a more accessible position for it might have been easily selected, and the expense of deepening and widening the channel altogether avoided. Still, however desirable such might be, circumstances prevent the selection of any other site than either that occupied by the present structure, or one in its immediate vicinity.

If the former be adopted it will be necessary to cut through the present "river dam," and construct a longitudinal coffer dam outside of the old structure, the whole length of the Lock pit. This would of course contract the water way, whilst the works were in progress, and on its removal leave the south wall of the new Lock exposed in like manner as the old one has always been.

Both these objections, it is believed, would be met, and the "river dam" left undisturbed, by placing the new Lock, say 10 feet further to the north than the old one, thus allowing the present south wall to remain, first to serve as part of the necessary coffer dam, and afterwards for the protection of the new work, thereby obviating the necessity of forming the rear side of the south wall of dress stone, as originally contemplated. This, although causing considerable additional excavation on the north side, at both the upper and lower entrance, would very little, if any, increase the ultimate cost of the work.

I am therefore of opinion, in the absence of details, that it would be the most judicious course, to place the new structure in the position above indicated.

The unserviceable condition of the old Lock having been from time to time represented, and its reconstruction urged upon the Government, by the inhabitants and other interested parties, a contract was entered into in 1857, for the furnishing of a portion of the necessary materials for that purpose.

On this Contract there has been provided and paid for at assumed rates :—

$324\frac{4}{27}$	Cubic Yards of Dressed Stone,
575	do do rough do
7865	do Feet Pine Timber,
1688	do do Oak, do
18	Knees for Lock Gates, &c.,
50,000	Feet B M Pine Plank,

Amounting in all to the sum of $5842.97.

The stones are still at Bobcaygeon, the place where they were quarried. The planks are piled near the Lock, and the timber lies on the sides of the roads and streets, in the same neighbourhood.

These materials are of course fast deteriorating, and will continue to do so while they remain in their present position.

I may further state that, instead of having the Swing Bridge over the chamber of the Lock as at present, the inhabitants are desirous of having it placed on the line of Lindsay Street, which is from 25 to 30 feet below the lower wing walls of the Lock.

This arrangement would decidedly improve the appearance of the place, and obviate such delays as might otherwise be experienced, when a vessel was locking through ; still, as independent abutments must either be built, or the lower wings extended for that purpose, it would considerably increase the cost of the work.

The advantages that the village and locality would derive from it, might however, be a sufficent inducement for the inhabitants to defray a portion of the additional expense.

The probable cost of completing the works referred to, and for the improvement of the Channel up to Lake Scugog, is estimated as follows :—

Constructing Coffer Dams and unwatering work	$ 3600.00
Removal of old Lock, excavation and embankment	5000.00
Timber and plank in foundation, mitre sills, iron stop-waters, &c.,	6000.00
Masonry of Lock	19200.00
Gates, sluices, &c., complete	2900.00
Swing Bridge,	6000.00
Contingencies	2300.00
Probable Cost	$40.000.00
Deduct for materials provided	5.842.97
	$34157.03
Amount still to be expended, if the Swing Bridge is placed before the Lock, a further outlay will be necessary of	$ 2400.00
Deepening and improving Channel below Lock	14000.00
Improvement of route at several places between Lindsay and Lake Scugog	10000.00
Total	$60557.03

The above Estimate contemplates that the Municipality of Lindsay, or of the Township, will construct the necessary bridges over the river, and race-way from the mills.

In closing this part of the subject, it is deemed proper to state, that the only portions of the works referred to, which may for a time be dispensed with, when the improvements are undertaken, are those from the Lock upwards to Lake Scugog, and that before the others can be placed under contract, in anything like a satisfactory manner, it will be necessary to have a careful survey made, and correct cross sections taken of all that portion of the river passing through the town plot of Lindsay.

Following the course of the river downwards, to Sturgeon Lake, a distance of about 7 miles, the Channel is generally of sufficient depth, with the exception before stated. This section of the route has been much improved within the last few years, by cutting off several of the most prominent points, and forming new cuts at a few of the worst bends, so that vessels can now pass through with comparitive ease, to what they did formerly.

Through Sturgeon Lake, a distance of 12 miles, there is an abundance of water for vessels of a much larger class than any at present, or at all likely to be on this route.

This Lake is supplied principally by the Fenelon River, which enters at its north west end, and forms the outlet of numerous small lakes in the interior, on the shores of which lumbering operations are carried on to a large extent, and the surrounding country at many places is said to be rapidly filling up and improving, by an industrious class of settlers.

When the question of opening a line of communication between Lakes Huron and Ontario, by the route of the Trent and Lake Simcoe, was under consideration (about 30 years ago,) and I believe partly decided on, it was proposed to connect Sturgeon and Cameron Lakes by means of three Locks, placed in the line of a ravine in the vicinity of Fenelon Falls, thence to ascend to Balsam Lake by another Lock.

The scheme as a whole, although generally abandoned, is in part still viewed favorably by a few, who urge that a large extent of rich and fertile country, would be opened up by continuing a line of navigation past the Falls, and that the Government would be more than compensated for the expense of constructing the works, by the increased value of land, &c. Although by no means convinced of the correctness of this view, it is submitted from the pressing manner it has been from time to time urged upon me within the past year.

The neighbourhood of the Falls however, offers great facilities for the erection and efficent working of machinery, especially such as require the power which an abundance of water, with a high head and fall can supply, and its advantages otherwise, for large Lumbering manufactories, are second to only a few places in the Province.

Some years ago large saw mills were erected there, but they had only been a short time in operation, when the whole were accidentally destroyed by fire ; since that casualty no use has been made of the water power.

BOBCAYGEON WORKS, &c.

The Works here are of an extensive and somewhat varied character, consisting of three dams, a slide, a short reach of canal, a swing bridge, a lock, a saw mill basin, and mill race, all of which, have either been constructed or thoroughly repaired since 1855, except the slide, for the re-building of which materials have been provided.

There having been, originally, three natural outlets at the lower end of Sturgeon Lake, the centre one being the smallest and most direct, was selected and improved so as to form what is now the navigable channel.

The others were closed by dams of a sufficent height, to maintain the water at 3 feet 9 inches, on the shoal below Lindsay Lock.

These Dams, so far as could be seen, appeared to be of a good class of work, and from the information furnished on the spot, I am led to believe, that when the repairs were in progress, all the defective timbers observed were taken out, and others put in their places, and that the upper side of all of them was covered with new plank, of sufficent length, to reach from top to bottom, and, further, that these covering plank were properly puddled at the top, and the whole afterwards well backed up and loaded to a good depth with gravel.

At all events they stand well, and are as staunch as could be expected, or the circumstances require.

The Canal is 33 feet wide, and abont 900 feet long, including the Lock, 500 feet of it is lined with timber and plank, to prevent the water escaping by the numerous and large fissures in the rock through which it is formed.

At a distance of 100 feet above the Lock, a roadway is continued across the Canal, by means of a swing bridge, supported on abutments of dressed stone, starting from the surface of the rock. The bridge is constructed in a manner similar to those on the other Provincial Canals.

The Lock is 33 feet wide, and 133 feet long between the gates, and has a lift of 6 feet ; both the upper and lower mitre sills are placed on the same level, and so as to be 5 feet under the assumed low water mark.

The wings, recesses, and piers of both ends are of cut stone, and the face of the chamber walls consists of what is termed " hammer dressed work."

The whole of the masonry is of a good class, well-dressed, and laid, I believe, in hydraulic mortar.

The upper and lower gates are of the same length, and constructed " on the solid principle" of pine timber, and are opened and closed by means of balance beams.

On the south side of the Lock, and at a distance of about 70 feet below it, is a small grist mill, to which a raceway of masonry has been built, from a point 10 feet above the upper recess, the rear part of the Lock wall forming one side, and a separate wall the other. The bottom is well secured with concrete timber and plank, and the top closely covered. The whole forming a conduit for the water, that will compare favorably with the greater number of works of its kind.

On the north side of the Lock is a saw mill, for the convenience of which, a "saw log basin" has been formed of a like class of masonry as the chamber walls of the Lock. This basin is also the head race to the mill, and has its entrance from the Canal about 10 feet above the upper recess.

From the above brief description of the works, it will be evident they are generally of a good class. There are, however, some serious drawbacks to the usefulness of those directly connected with the navigation, arising from, 1st. The all but inaccessibleness of the Lock at its lower entrance.

2nd. The frequent obstructions experienced in approaching it from above, &c., each of which will claim attention in its order.

1st. The Lock being situated immediately above a sudden bend of the channel-way, the sides of which consist of large blocks of stone, angular and pointed, and the space between them so extremely narrow, that a vessel in passing, is liable to be injured under any circumstances, while the danger is greatly increased, and the difficulty rendered all but, and frequently altogether insurmountable, by the strong current that sweeps directly across the channel, from the tail-race of the saw mill above referred to, at a point within 75 feet of the lower end of the Lock, and near the narrowest, most crooked, and intricate part of the outlet; and moreover, slabs, edgings and saw dust from the mill, very often complete the entire blocking up of the passage.

At the time of my visit there, in the fall of 1858, a steamer of very light draught was delayed for a considerable time, but on the saw mill having been stopped, the vessel succeeded, by a good pressure of steam, in ploughing through the slabs, &c.

Last fall, while I was there, the steamer Ogema, succeeded with great difficulty in passing downwards through this channel, but was quite unable to return.

This was alleged by some, to be caused wholly by the waste of water at Buckhorn, lowering the lakes above; but an examination of the various matters connected therewith, fully convinced me that, it was only one of the many causes.

The channel can of course, be much improved by increasing its width and depth, but, unless some stringent regulation is enforced for its future protection, it would again, in a short time, be in an equally unserviceable state as at present.

The proprietor of the mills, however, assured me that, in future, no slabs or edgings would be allowed to get into the channel, still, with all due respect to such promises, it must be admitted, that what has been done, may, under similar circumstances be done again, while the propriety of allowing the efficiency of any Public Work, to be wholly dependent on the forbearance of any private individual, seems exceedingly questionable.

In order therefore to prevent such occurrences in future, and remedy some of the evils complained of, it is proposed to place a strong RACK across the tail race of the mill, at a short distance above where it enters the channel, and, at a few feet beyond the outlet, to moor a strong boom made of two depths or more of heavy timber,—the latter it is believed would give the current a more downward direction, while the rack would effectually keep the channel clear of everything except sawdust, which although found to be a great nuisance as it enters the lock, and settling there prevents the gates from working freely, cannot be well got rid of, without incurring the expense of collecting it and carting it away, or turning the tail race to the other side of the island, which would really be the better course, were it not that a few inches of back water would at times be likely to diminish the head.

The works above proposed together with widening the channel at two points, (one on the north and the other on the south side), removing loose stone from the sides and bottom, clearing out sunken timber, slabs &c, could be done for about $1,000 00; still with a larger sum judiciously expended, the entrance could be still further improved.

2ndly. The width of the cut above the lock as already stated being 33 feet, does not admit of two vessels passing each other in it, which, in the absence of any regulations as to where one or other shall tie up, has on several occasions led to unnecessary squabbles, among those in charge of them.

But the greatest cause of annoyance and delay arises from the channel being obstructed by sawlogs, which, I was informed, are often brought down in rafts, and separated above the gates, and some times in the lock, the "traverses" and "withes" that connected them, being allowed to sink or float according to circumstances, the latter being the exception, this was found to be the case on the two occasions that I visited the place. Both times the canal was obstructed by saw logs, and sunken traverses of heavy green timber had to be grappled up from the bottom of the lock, before the gates could be opened or closed, while the "withes," it is said, frequently get so twisted round the valves, as to render them unserviceable.

I was further informed that the sawlogs used during winter, are hauled across the swing bridge, and there dumped into the canal, causing large quantities of bark to accumulate at and in the lock.

These liberties taken with the navigation, clearly show that it is looked upon as secondary to the milling interest of the place, a conclusion most likely to have been brought about, by the circumstances of the original works having been allowed to remain so long in an unserviceable condition, together with the fact of the whole adjoining property, being owned by private individuals.

The improvements in the first instance having been carried on under the management of local commissioners, who, from all I have been able to learn, acquired no other title to the land through which the canal passes, than verbal permission to that effect from the proprietor, it has led to great dissatisfaction and interference with the works, as well as much additional expense in their construction, as the parties now owning the lands, claim up to the water's edge. Mr. Boyd, the proprietor of the mills, is understood to own the whole on both sides of the lock and canal, up to the swing bridge, and to have a lease for twenty one years of all on the north side above that point; the land on the south side is also said to be private property.

The whole is however occupied on both sides up to the brink of the cut, with lumber piled to a considerable height, which when removed is placed directly into a vessel moored in the canal, thus affording no opportunity whatever for another to pass.

Thence, there being no room or place, in the vicinity of the village, for vessels landing or receiving freight, other than those in the employment of the mill owner, parties insist on doing it at the lock, where contrary to all known regulations elsewhere, merchandize, hay, wood, gravel and building materials have been landed. In vindication of this it is said, that the works being public property, the public ought to have some accommodation from them. It is further stated that emigrants for the back townships (which are fast settling up) on arriving at that point, are, for similar reasons, put to great inconvenience and expense, with their baggage. It is therefore urged by the inhabitants that a public wharf and store house, are not only required, but that they should be provided by the government.

From what has been said, it will be evident that, in order to keep this route open for navigable purposes, it should be placed under a similar class of regulations, as those in force on the other provincial canals, especially that of the 11th section of them relating to obstructing Public Works should be strictly enforced, with such additions as the following:—

1st. That no scow, barge, or other vessel should be allowed to take on or deliver freight, while in either the Lock or the Canal, except that passenger steamers may have the privilege of taking in fuel, landing or taking on freight, when in the Canal, provided that no longer time is occupied in so doing, than one half hour, and no detention is caused thereby to any other vessel.

2nd. That, in cases of two vessels approaching the Lock from opposite directions, about the same time, one of them should stop or tie up opposite a fixed point, outside of the entrance, until the other has passed through.

3rd. That in cases where logs are taken down to the saw mill in operation on the north side of the Lock, the rafts of which they form a part, must be separated in the Bay above the entrance, and no more than two logs abreast of each other shall be sent down, or allowed to accumulate in any part of the Canal at one time, neither shall there be in the whole Canal, at any one time, more logs than the basin built for their reception can accommodate;—but especially that no floats, "traverses" or "withes" shall be allowed to enter the Canal, whether separate or connected with the logs intended for the saw mill, and further that any bark, slabs, edgings, or other obstructions found in the Lock or approaches to it, known to have emanated from the mill or handling of the logs for it, shall be removed at the mill owners expense, who shall in addition be fined the sum of
for each time such an occurrence takes place.—

The Lock Keeper is the only person in any way connected with the management of the works at this place. He appeared active and intelligent, but his health was scarcely equal to the efficient performance of such duties as devolve upon a person acting in that capacity.

He stated that he had repeatedly, within the past two years, applied by letter to the department, for instructions relative to his duties, stating the difficulties he had to contend with, &c., but had received no answer.

These troubles were then enumerated in detail, but as they relate principally to matters already referred to, it is unnecessary to repeat them here.

It however appears to me that a Lock Keeper at a station so remote, being allowed to act without instructions either gives him too much power, or, as interested parties say, leaves him none whatever. I therefore consider his duties should be sufficiently defined, to enable him to act promptly and in such a way that his authority will be respected.

Having thus pointed out the principal matters requiring attention at this place, it is proper to state that the following mentioned works of maintenance are also necessary, namely :—

Clearing out the chamber of the Lock, adjusting the lower gates, which are at present difficult to open, or close, and raising the Swing Bridge so as to rest more on the pivot, furnishing and attaching to it a travelling crab, for the purpose of moving it, all of which would cost about $350.

The slide of the upper dams should be also reconstructed ;—for this purpose the greater portion of the necessary materials have been provided, delivered and paid for. The probable cost of what is still required, together with the workmanship, will amount to $600 00.

It may further be said, that the great difficulty experienced in unwatering the Lock pit when the works were in progress of construction, at this place, had rendered necessary a large outfit, consisting of a portable engine (8 horse power) 4–12 inch pumps, suction hose and other articles, which were used for part of the first season, but found insufficient for the purpose. Consequently for the second years operations additional power was provided, consisting of an engine of 18 horse power, and more efficient pumping apparatus, which when worked at a high speed, effectually accomplished the object.

The whole of this machinery still remains at Bobcaygeon, principally under cover of a temporary shed erected for the purpose.

In the event of its being allowed to remain there much longer, I consider more care should be taken of the engines, both of which are of a good class, well got up and finished.

The Dredging machine used in improving the Channel of the Scugog River, is also at Bobcaygeon, where it lies partially sunk. The engine and machinery is the property of the Department, but the scow or vessel on which it is fitted up, is claimed by the Contractor.

It is however very desirable to have the question of ownership of the hull decided, before the machinery is further injured by being in the water.

BUCKHORN RAPIDS.

The principal works at this place are a Dam, a road bridge, two flumes, a slide for the passing of lumber, with guide piers and booms leading thereto.

The Bridge is a new structure about 642 feet long, built over and framed into the dam, of which it may be considered part; it is well and substantially executed, of good materials, and as a whole will compare favourably with most erections of its kind.

It forms the only means of a land communication with the northern Townships, for a distance of at least 15 miles on either side of it, where lumbering operations are at several places carried on to a large extent, and by it the slide, flumes and piers, are at all times rendered accessible.

Within the past few years the greater portion of the dam has been rebuilt, and the remainder of it is said to have been thoroughly repaired, and care taken in both cases to render it staunch; still the precautions adopted appear not to have been quite successful, there being a considerable body of water passing through under it.

This may however be attributed more to the foundation than to any defect in the work—the bed of the River at the place consisting partly of loose granite boulders and rock, in which there are many large deep fissures running in every possible direction, some of which no doubt extend a long way above the dam and others below it.

These the Contractor informed me he had endeavoured to staunch, where they appeared within the line of his temporary dam, and that he had succeeded in doing so with many. Still it is quite possible that some of them might not be visible there, although open higher up stream.

Having carefully examined this work on two different occasions, I am favourably impressed with the principal part of all that could be seen of it, and judging from circumstances together with the representations made to me on the spot, there appears no reason to doubt, but that the portion of it under water was made equally substantial. Still the appearance of the water surface having induced me to make a close examination of the apron, I am led to believe that it might be made tighter, by an additional covering of gravel and brush, at a few places where the greatest quantity of water seemed to escape, and therefore recommend the sum of $500 be applied to that purpose.

This dam being intended to maintain Buckhorn, Mud and Pigeon Lakes, and the river connecting them, at a navigable height, when any deficiency of water is experienced by vessels, the cause is at once attributed to the insufficiency of the dams, and the leakage at it, is pointed to as a proof of this being the case.

It should however be borne in mind, that the leakage complained of is not equal to one third or at the outside one half of the volume of water, that is constantly passing at Bobcaygeon, shewing clearly that there must be other ways of it escaping than directly under the Dam.

A fact that no one can fail to be convinced of, who in passing along the Bridge, has observed a rickety old flume connected with a small saw-mill, situated a short distance below on the north side of the river, that there is there more leakage and water wasted, than escapes in the whole length of the Dam.

There is no objection whatever to the mill, or even one triple its capacity being supplied with an abundance of water through the opening left for that purpose; but there are certainly many decided objections to the unnecessary waste of water, that takes place through the works leading to it; so much so, that in my opinion it is quite useless to attempt keeping the line of navigation, above, in anything like a passable state, during the early part of the fall, if the owner of this mill cannot be compelled to put his flume into a proper condition.

I am not aware of the nature of his claim or right to the privilege, but whatever that may be, no private interest should be permitted to interfere so much with the utility of an extensive Public Work.

It therefore seems proper that the owner should be notified to the effect, that, unless the works leading to his mill are, within a reasonable time, placed in such a state of repair as not to consume more water than is required for his milling operations, the water will be shut off at the entrance to his flume.

On these matters having been attended to, there is every reason to believe that no deficiency of water will be experienced at any season, provided that such arrangements are made, as will prevent in future the careless or designing from interfering with the works.

The necessity of this will be evident from the fact, that on several occasions the stop logs have been cut out of the flume, at one time for the purpose of lowering the water in the Lakes above, and at another time with a view of sending down a volume, sufficient to carry rafts over some of the shoals below,—while on another occasion a large quantity of sawlogs, were sent down towards the Dam, without any one feeling interest enough in the matter to remove the stop logs from the slide, so as to allow the rafts to pass,—the result of which was the destruction of a large portion of the guide boom, and imminent danger to other parts of the works.

It thus shews that at certain seasons without some one on the spot having control, no dependance can be placed on either the maintenance of the water or the security of the works themselves.

Whilst in that neighbourhood my attention was repeatedly drawn by interested parties, to the difficulty and danger that exists in timber passing immediately below the slide there, arising from the extent of shoal water, and set of the current below the dam, at what is called the "running season." Although I have not seen the water at the pitch referred to, still the appearance of the place seems to bear out the representations made. It therefore appears to me that the only way of remedying the evils complained of, is to extend the pier from 150 feet to 200 feet further down stream. This would cost about $2500.

Having thus drawn attention to the position and condition of these isolated works, undertaken with a view of creating the means of communication between some of the Island Townships in their vicinity;—it is deemed unnecessary to say more than that if these improvements possess, even a moderate share of the importance which has been claimed for them, they should undoubtedly be placed under such regulations, and management, as will have a tendency to render them more serviceable and efficient, and with that object in view I beg respectfully to submit the foregoing suggestions.

I have the honor to be, Sir,
Your obedient servant,
(Signed) JOHN PAGE,
C. E., Public Works.

PERMALIFE
PH 8.5
THE HOLLINGER CORPORATION
ARLINGTON, VIRGINIA

PERMALIFE
PH 8.5
THE HOLLINGER CORPORATION
ARLINGTON, VIRGINIA